

INTER-DEPARTMENTAL MEMORANDUM

TO: MS. JENNIFER STAPP, STATE LIBRARIAN MONTANA STATE LIBRARY
FROM: RICHARD OPPER, DIRECTOR DEPT. OF ENVIRONMENTAL QUALITY
MARY SEXTON, DIRECTOR DEPT. OF NATURAL RESOURCES & CONSERVATION
SUBJECT: WATER INFORMATION SYSTEM STAFFING NEEDS RELATED TO AGENCY USE OF
THE NATIONAL HYDROGRAPHY DATASET AND ITS STEWARDSHIP
DATE: DECEMBER 28, 2012
CC: JOE MAURIER, DIRECTOR DEPT. OF FISH, WILDLIFE, & PARKS
TIM REARDON, DIRECTOR DEPT. OF TRANSPORTATION
ALLAN COX, PROGRAM MANAGER NATURAL HERITAGE PROGRAM
ATTACHMENT: STATE AGENCY NHD USES & STEWARDSHIP NEEDS DOCUMENT

Ms. Stapp,

The DEQ solicited the state's GIS Managers and NRIS Advisory Committee to identify applications and uses of the high resolution National Hydrography Dataset (NHD) to meet statutory, regulatory, and (or) programmatic business needs. There were 44 applications and uses identified by five state agencies and programs, of which, 30 have a direct relationship to state or federal statute or rule and the remaining 14 assist in meeting state programmatic business needs. Moreover, 24 applications of the NHD to environmental or biological data result in an event table or GIS feature class dataset that is then published via the state's GIS Portal or otherwise made publically available. These value-added datasets are in turn used by many more stakeholders at all levels of government, research institutions, and private sector entities.

NOTE: the 44 uses presented here are only those identified by the entities noted on this memo during the short discovery period; more uses of the NHD by stakeholders in the state are very likely.

What is most imperative for our programs is creating and maintaining the most accurate and up-to-date representation of state waters in the high resolution NHD. At present, the current NHD is not at this level and needs deliberate and active stewardship to attain this. We have identified nine specific areas that the state's NHD steward should focus on to achieve this. While this work is substantial, a few notable issues are critical to improving the credibility of the high resolution NHD, specifically, the accuracy of flow lines and correctness of waterbody names.

We support your efforts to bolster the staffing resources for the MSL NRIS program so as to revitalize the state's Water Information System program and support the needs of Montana's water-related resource stakeholders.

Sincerely,


Richard Opper, Director DEQ


Mary Sexton, Director DNRC

National Hydrography Dataset Uses

Item (existing or potential)	Statute & Rules (MCA, ARM, USC, CFR)	Class	Scale	Agency
State Water Plan / Planning	MCA 85-1-203	Product / Use	1:24	DNRC
Water Quality Integrated Reporting (Assessment Units)	MCA 75-5-702 33 U.S.C. § 1314 & 1315 40 CFR 130.8	Event Table / Feature Class	1:24	DEQ
Water Quality Monitoring Locations	MCA 75-5-702 40 CFR 130.4	Event Table / Feature Class	1:24	DEQ
Water Quality Reference Sites	MCA 75-5-702 40 CFR 130.4	Event Table / Feature Class	1:24	DEQ
State Water Use Classification (Water Quality Standards)	MCA 75-5-301 ARM 17.30.600 et seq. 33 U.S.C. § 1314 40 CFR 130.3 & 131.4	Event Table / Feature Class	1:24	DEQ
MPDES Permit Outfalls	MCA 75-5-703	Event Table / Feature Class	1:24	DEQ
Species Occurrence Mapping	MCA 90-15-102	Event Table / Feature Class	1:24	NHP, MDT
Wetland Mapping	MCA 90-15-102	Event Table / Feature Class	1:24	NHP, MDT, DEQ
Lotic Aquatic Ecological Systems Mapping	MCA 90-15-102	Event Table / Feature Class	1:24	NHP
Floodplain Mapping	MCA 76-5-Part 2 ARM 36.15 Chapter 5	Event Table / Feature Class	1:24	MDT, DEQ, DNRC, FWP, Commerce
Fish Distribution / Occurrence / Presence		Event Table / Feature Class	1:24	FWP*
Wildlife Distribution / Occurrence / Presence		Event Table / Feature Class	1:24	FWP*
Dewatering Status		Event Table / Feature Class	1:24	FWP*
Minimum Instream Flow		Event Table / Feature Class	1:24	FWP*
Survey site locations		Event Table / Feature Class	1:24	FWP*
Fisheries telemetry work (need network)		Event Table / Feature Class	1:24	FWP*
Fishing regulations		Event Table / Feature Class	1:24	FWP*
Stream Access	MCA 23-2-Part 3	Event Table / Feature Class	1:24	FWP*
Instream barrier locations		Event Table / Feature Class	1:24	FWP*

Item (existing or potential)	Statute & Rules (MCA, ARM, USC, CFR)	Class	Scale	Agency
Chronically Dewater Watercourse - Identification	MCA 85-2-150 ARM 36.13.102	Event Table / Feature Class	1:24	DNRC, FWP*
Public Ways (Water)	MCA 85-1-111	Event Table / Feature Class	1:24	DNRC, MDT
Navigable Waters	MCA 85-1-112	Event Table / Feature Class	1:24	DEQ, DNRC, MDT
Water Rights – Appropriations, Permits, and Certificates of Water Rights	MCA 85-2-Part 3 ARM: ~36.12.101 to 36.12.2001	Event Table / Feature Class	1:24	DNRC, MDT, FWP*
Indian and Federal Reserved Water Rights	MCA 85-2-Part 7	Event Table / Feature Class	1:24	DNRC
Aquatic Invasive Species	MCA 80-7-Part 10 ARM 12.5.701-703	Event Table / Feature Class	1:24	DNRC, AGR, FWP*
Water Quality Assessment (beneficial use support/attainment)	MCA 75-5-703 40 CFR 130.6 & 130.7	Use	1:24	DEQ
Water Quality Restoration – TMDL	MCA 75-5-703 40 CFR 130.6 & 130.7	Use	1:24	DEQ
Watershed / Water Quality Modeling	MCA 75-5-703 40 CFR 130.7	Use	1:24	DEQ, DNRC, FWP*
Highway construction & maintenance		Use	1:24	MDT
Forestry – Streamside Management	MCA 77-5-Part 3 ARM 36.11.301-313	Use	1:24	DNRC
Drought Advisory Committee	MCA 2-15-3308	Use	1:24	DNRC
Water Rights - Adjudication	MCA 85-2-Part 2	Use	1:24	DNRC
Water Rights – Temporary Changes	MCA 85-2-407 ARM: ~36.12.1801 to 36.12.1904	Use	1:24	DNRC
Water Rights - Enforcement		Use	1:24	DNRC
Water Rights - Water Commissioners		Use	1:24	DNRC
State Reservation of Waters	MCA 85-2-316 ARM: 36.12.101 36.16.101	Use	1:24	DNRC
Indian and Federal Reserved Water Rights	MCA 85-2-Part 7	Use	1:24	DNRC
Dam Safety Act	MCA 85-15-210 ARM: ~36.14.101 to 36.14.803	Use	1:24	DNRC
Major Facilities Siting Studies	MCA 75-20-101 et seq.	Use	1:24	DEQ

Item (existing or potential)	Statute & Rules (MCA, ARM, USC, CFR)	Class	Scale	Agency
Environmental Impact Statements	MCA 75-1-201 et seq. ARM 17.4.600 et seq. 42 USC § 4321 et seq. 40 CFR 1502	Use	1:24	DEQ
Coal mine permitting & reclamation plan development	MCA 82-4-205 ARM 17.24.304 ARM 17.24.314 ARM 17.24.634	Use	1:24	DEQ
Land acquisitions (riparian habitat and recreational opportunities)		Use	1:24	FWP*
Energy facility siting (oil & gas)		Use	1:24	FWP*
Landscape and Ecosystem Assessment and Modeling		Use	1:24	NHP

*All FWP use of the 24K is dependent on the presence and maintenance of a whole stream identifier

National Hydrography Dataset Stewardship Needs

NHD Issues, Concerns, Needs	Scale	State Agency
Feature Type editing (flow line, points, area)	1:24	All
Water names - Geographic Names Information System (GNIS)	1:24	All
2D / Multichannel streams	1:24	All
Border harmonization	1:24	All
Whole stream identifier (LLID cross ref.)	1:24	FWP, MDT, DEQ
100-yr floodplain	1:24	MDT, DNRC, DEQ, Commerce
Wetlands	1:24	NHP, MDT, DEQ, DNRC, FWP
Networking capabilities	1:24	FWP
Stream Order	1:24	MDT, DEQ